RRB Clerk Pre 2022 (14th August) Shift-Wise PYP Mock 10

Directions (1-5): Study the following information carefully and answer the questions given below.
A certain number of persons sit in a row facing the north direction. X sits 2nd from one of the extreme ends of the row. Two persons sit between X and E who sits immediate right of A. Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E. As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. The number of persons sits to the right of P is one less than the number of persons sits to the left of A.

Q1. How many persons sit in the row?
(a) 18
(b) 17
(c) 20
(d) 19
(e) 16

Q2. Who among the following person sits 2nd to the left of Q?
(a) A
(b) B
(c) S
(d) P
(e) M

Q3. How many persons sit between B and P?
(a) 10
(b) 8
(c) 13
(d) 11
(e) 9

Q4. The number of persons sits to the right of P is one more than the number of persons sits to the left of ___.
(a) M
(b) B
(c) X
(d) None of these
(e) Q

Q5. If D sit exactly between Q and M, then who among the following person sits 4th to the right of D?
(a) S
(b) P
(c) M
(d) E
(e) X

Directions (6-8): Study the following information carefully and answer the questions given below.
A man leaves for his office from his house. He walks towards south and after walking 5m he takes a left turn and walks 6m. From there he takes a left turn and walks 4m. After that he takes two consecutive rights turn of 3m and 2m respectively and reaches his office.

Q6. In which direction is his office with respect to his house?
(a) South
(b) East
(c) South-East
(d) North- East
(e) West

Q7. What is the total distance covered by him from his house to his office?
(a) 15m
(b) 20m
(c) 25m
(d) 10m
(e) 18m

Q8. If he walks 3m north from his office and reaches at point A, then in which direction is his house with respect to point A?
(a) North
(b) North-East
(c) North-West
(d) West
(e) South

Directions (9-13): Study the following information carefully and answer the questions given below.
Eight persons A, B, C, D, E, F, G and H sit around a circular table and all of them faces inside the table but not necessarily in the same order. (Note- The consecutive alphabetical named persons don't sit adjacent to each other. For example: - B neither sits just right nor just left of A).
C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E. F and A faces each other.

Q9. **Who among the following persons sit 2nd to the right of A?**
(a) C
(b) B
(c) H
(d) D
(e) None of these

Q10. In which direction B sits with respect to H?
(a) 3rd to the left
(b) 3rd to the right
(c) 4th to the right
(d) 4th to the left
(e) Immediate Right

Q11. How many persons sit between D and C when counted from right of D?
(a) One
(b) Three
(c) Two
(d) Four
(e) Five

Q12. Who among the following faces C?
(a) D
(b) None of these
(c) B
(d) H
(e) G

Q13. Who are the immediate neighbours of A?
(a) E, H
(b) G, E
(c) D, G
(d) F, E
(e) D, F

Directions (14-17): In each of the questions below, some statements are given followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q14.
Statements:
Only a few A are D. Some C are D.
Conclusions:
I. Some A can be C.
II. All D can be A.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusion I and II follows.

Q15.Statements: Some Play are Toy. All Play are Ground. No Dry is Ground.
Conclusions:
I. No Play are Dry.
II. Some Toy are not Ground.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusion I and II follows.

Q16.Statements:
Only Bear is Teddy. No Lion is Bear. No Cat is Lion.
Conclusions:
I. Some Bear being Lion is a Possibility.
II. No Teddy is Cat.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusion I and II follows.

Q17.Statements:
Only a few 30 is 13. Some 23 is 32. No 23 is 30.
Conclusions:
I. All 32 can be 13.
II. Some 13 is not 23.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusion I and II follows.

Directions (18-20): In each of the following questions assuming the given statements to be true, find which of the two conclusions I and II given below is/are definitely true and give your answer accordingly.

Q18. Statements: H > Y < K; Y= J > E
Conclusions: I. H > J **II.** E = K
(a) If only conclusion I is true.
(b) If only conclusion II is true.
(c) If either conclusion I or II is true.
(d) If neither conclusion I nor II is true.
(e) If both conclusion I and II are true.

Q19. Statements: I ≥ N = B = T; N < F = W
Conclusions: I. T ≤ I **II.** W > B
(a) If only conclusion I is true.
(b) If only conclusion II is true.
(c) If either conclusion I or II is true.
(d) If neither conclusion I nor II is true.
(e) If both conclusion I and II are true.

Q20. Statements: U > F < V > D < L = C > W
Conclusions: I. V ≥ C **II.** D < W
(a) If only conclusion I is true.
(b) If only conclusion II is true.
(c) If either conclusion I or II is true.
(d) If neither conclusion I nor II is true.
(e) If both conclusion I and II are true.

Directions (21-25): Study the following alphanumeric series carefully and answer the questions given below.
S J 2 L D U A W 8 X Q C 7 6 M 4 H K R Z 9 1 N E 5 T 3 V Z

Q21. Which of the following element is 4th to the right of 8th element from left end of the series?
(a) 7
(b) Q
(c) C
(d) X
(e) K

Q22. How many letters are there which are immediately followed by a number?
(a) Three
(b) Five
(c) Four
(d) Six
(e) More than Six

Q23. How many vowels are there which are immediately followed and preceded by a letter?
(a) None
(b) One
(c) Two
(d) Three
(e) Four

Q24. How many numbers are there which are immediately followed by a consonant and immediately preceded by a vowel?
(a) None
(b) Two
(c) Three
(d) One
(e) More than Three

Q25. Four among the following five are same in a certain manner according to their arrangement in the series. Which among the following does not belong to the group?
(a) 2DA
(b) 8Q7
(c) 64H
(d) R9N
(e) 53Z

Q26. How many pairs of letters are there in the word 'HIERARCHY', each of which have as many letters between them in the word as they have in English alphabetical series (both forward and backward direction)?
(a) One
(b) Three
(c) None
(d) Two
(e) Four

Directions (27-31): Study the following information carefully and answer the questions given below.
Six persons J, K, L, M, N and P attends a seminar on two different dates i.e., 14th and 23rd of three different months viz. April, July and December of a year but not necessarily in the same order.
P attends the seminar on an even date. Three persons attend seminar between P and K. L attends just after J but not in same month. N attends seminar after K but not at last.

Q27. Who among the following persons attend seminar on 14th July?
(a) L
(b) N
(c) M
(d) P
(e) K

Q28. How many persons attend seminar between K and M?
(a) One
(b) Two
(c) Three
(d) Four
(e) None

Q29. Who among the following person attends the seminar just before N?
(a) M
(b) J
(c) K
(d) P
(e) L

Q30. Which of the following combination is not true?
(a) K- 14th April
(b) P-14th December
(c) L-23rd April
(d) N-23rd July
(e) M-23rd December

Q31. If all the person are arranged according to the alphabetical order from top to bottom, then how many personas remain unchanged?
(a) None
(b) One
(c) Three
(d) Four
(e) Two

Q32. If in the given number "7256291543", all the digits are arranged in descending order from left to right, then the 1st digit interchanged with the 2nd digit, 3rd digit with 4th digit and so on till 9th digit with 10th digit. After that, what is the sum of 3rd digit from left end and 5th digit from right end of the number thus formed after rearrangement?
(a) 9
(b) 10
(c) 8
(d) 7
(e) 11

Directions (33-37): Study the following information carefully and answer the questions based on it.
Ten persons live on different floors of a five-story building where ground floor is numbered as 1, just above it is 2 and so on till the topmost floor is numbered as 5. Each floor has two flats flat I and flat II (from west to east on each floor).
C lives west of G and they live on prime numbered floor. P lives just north-east of C. One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. D lives south-east of M and south of T. S and T live on same floor. U lives above Q.

Q33. Who among the following person lives just below U's flat?
(a) None of these
(b) Q
(c) G
(d) C
(e) P

Q34. Who among the following person lives on 3rd floor?
(a) C
(b) Q
(c) G
(d) S
(e) T

Q35. Four of the following five are same in a certain manner and forms a group, who among the following does not belong to the group?
(a) D
(b) M
(c) Q
(d) C
(e) S

Q36. Who among the following person lives south of Q?
(a) G
(b) D
(c) F
(d) P
(e) M

Q37. D lives in flat ___ on __ floor.
(a) Flat II, 2nd floor
(b) Flat I, 2nd floor
(c) Flat II, 4th floor
(d) Flat II, 1st floor
(e) None of these

Directions (38-40): Study the following number series carefully and answer the questions given below.

264 945 748 457 523

Q38. If all the numbers are arranged in reverse order, then which of the following number will become 2nd from right end?
(a) 457
(b) 523
(c) 264
(d) 945
(e) 748

Q39. What will be the sum of all the digits of 3rd lowest number in the series?
(a) 10
(b) 19
(c) 9
(d) 12
(e) None of these

Q40. If 1st digit is interchanged with 3rd digit within the number, then which among the following number will become the highest number?
(a) 457
(b) 945
(c) 523
(d) 264
(e) 748

Directions (41-45): The table given below shows the number of visitors in Taj Mahal and Agra Fort on various days of a week. Study the chart carefully and answer the following questions given below.

Days	Number of visitors in Taj Mahal	Number of visitors in Agra Fort
Monday	350	250
Tuesday	400	300
Wednesday	500	450
Thursday	550	200
Friday	600	700
Saturday	750	500
Sunday	800	600

Q41. Find out the total number of visitors in Agra Fort on Sunday, Tuesday and Friday together.
(a) 1500
(b) 1600
(c) 1550
(d) 1650
(e) 1700

Q42. The number of visitors in Taj Mahal on Wednesday is what percent of the number of visitors in Agra fort on Friday.
(a) 45%
(b) $42\frac{3}{7}\%$
(c) 70%
(d) $71\frac{3}{7}\%$
(e) 75%

Q43. Find out the ratio between the total number of visitors on Monday to that of on Saturday for both Taj Mahal and Agra fort together.
(a) 12:25
(b) 13:27
(c) 11:21
(d) 12:19
(e) 25:13

Q44. Find out the average number of visitors in Taj Mahal on Monday, Thursday and Friday.
(a) 520
(b) 540
(c) 500
(d) 560
(e) 580

Q45. Find out the difference between the total number of visitors in Taj Mahal and that of in Agra Fort during the whole week.
(a) 1150
(b) 1100
(c) 1050
(d) 1000
(e) 950

Directions (46-50): What will come in the place of question mark (?) in following number series.

Q46. 3, 5, 9, 17, 33, ?
(a) 67
(b) 65
(c) 68
(d) 64
(e) None of these

Q47. 3, 5, 8, 13, 20, ?
(a) 35
(b) 37
(c) 33
(d) 31
(e) 29

Q48. 1, 16, 128, 512, 1024, ?
(a) 2048
(b) 1331
(c) 1728
(d) 1600
(e) 1024

Q49. 1, 2, 6, 21, 88, ?
(a) 475
(b) 454
(c) 455
(d) 440
(e) 445

Q50. 5, 6, 10, 19, 35, ?
(a) 75
(b) 60
(c) 66
(d) 54
(e) 64

Q51. There are two containers A & B which contains same quantity of mixture of milk and water. In container A milk is 80% and rest water, while in container B water is 60% and rest milk. Find in what ratio mixture from these containers should be mixed so that water and milk become equal in the final mixture?
(a) 2:3
(b) 1:3
(c) 3:4
(d) 3:5
(e) 1:4

Q52. If the radius and height of a cylinder is increased by 25% and 30% respectively, then find out the percent change in its lateral surface area?
(a) 50%
(b) 55%
(c) 60%
(d) 62.50%
(e) 66.66%

Q53. Sum of ages of Mohit and Riya five years hence will be 60 years. If the ratio of ages of Riya and Mohit 5 years ago was 3:5 respectively. Find out the present age of Riya?
(a) 17 years
(b) 18 years
(c) 19 years
(d) 20 years
(e) 22 years

Q54. Find out the compound interest on a sum of Rs. 36000 at the rate of 40% per annum for nine months, if the interest is compounded quarterly?
(a) 11916 Rs.
(b) 12200 Rs.
(c) 12000 Rs.
(d) 12500 Rs.
(e) 12321 Rs.

Q55. Priya alone and Shushma alone can complete same work in 8 days and (x+2) days respectively. If they work together, then they can complete the same work in $\frac{24}{5}$ days. Find out the value of x?
(a) 8
(b) 10
(c) 12
(d) 14
(e) 6

Q56. The ratio of upstream speed of a boat and speed of current is 4:1. If in downstream the boat can cover 60 km in 2.5 hours, then find out the speed of current?
(a) 6 kmph
(b) 4 kmph
(c) 5 kmph
(d) 8 kmph
(e) 3 kmph

Q57. If x% of 3y = y% of 2z, then find the value of $\frac{x+z}{z}$?
(a) $5\frac{2}{3}$
(b) $1\frac{1}{3}$
(c) $1\frac{2}{3}$
(d) $3\frac{2}{3}$
(e) $4\frac{2}{3}$

Q58. Ram bought 54 bananas for Rs. 220, and he sold these bananas for Rs. 50 per dozen, find out his total profit (in Rs.).
(a) 5 Rs
(b) 10 Rs
(c) 15 Rs
(d) 8 Rs
(e) 14 Rs

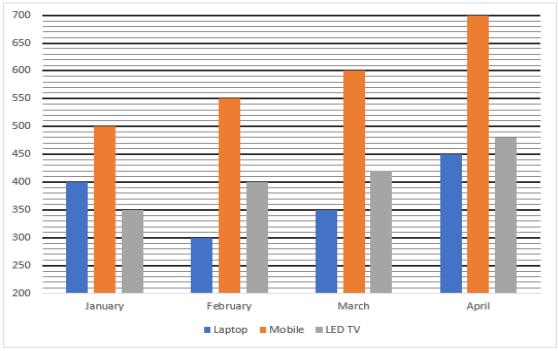
Q59. Pinky and Santosh started a business with investments of Rs. 45000 and Rs. 55000 respectively. Pinky left the business after 9 months, after one-year Santosh gets Rs. 8800 as his profit. find out the total profit (in Rs.).
(a) 14000
(b) 14200
(c) 14800
(d) 14500
(e) 14600

Q60. When numerator of a fraction is increased by 5 and denominator of the fraction is doubled, then fraction becomes ¾ . Find the original fraction?
(a) 1/4
(b) 4/5
(c) 1/2
(d) 5/8
(e) Cannot be determined.

Q61. The population of Delhi in 2020 is 14,58,000. Find population of Delhi in 2017, if population of Delhi decreased by 10% in every year?
(a) 20 lacs
(b) 25 lacs
(c) 24 lacs
(d) 16 lacs
(e) 30 lacs

Q62. Train Y crosses train X in 180 seconds while running in same direction and train X crosses a pole in 25 seconds. If length and speed of train Y is 400 meters and 90 km/hr. respectively, then find speed (in m/sec) of train X.
(a) 20
(b) 10
(c) 15
(d) 18
(e) None of the above.

Directions (63-67): The following Bar graph shows the number of three different items (Laptop, Mobile and LED TV) sold by a shopkeeper in four different months. Shopkeeper sells only these three items. Read the given graph carefully and answer the following questions.



Q63. Find the ratio between total Mobile and LED TV together sold in February to total Laptop & Mobile together sold in April?
(a) 17:23
(b) 19:23
(c) 21:23
(d) 17:19
(e) 19:17

Q64. Due to faulty products, 10% Laptop, 12% Mobiles and 15% LED TV were returned out of total units sold of these products by the customers in March month. Find the number of total returned items?
(a) 170
(b) 190
(c) 150
(d) 140
(e) 160

Q65. What is the difference between total items sold by the shopkeeper in February and total items sold by the shopkeeper in April?
(a) 400
(b) 450
(c) 425
(d) 380
(e) 350

Q66. Total laptops sold in January & February together is what percent less than total mobiles sold in January & April together.
(a) 66 ⅔%
(b) 45 ⅔%
(c) 41 ⅔%
(d) 43%
(e) 55%

Q67. In the month of May, number of sold laptop, mobile and LED TV are in the ratio of 2: 3: 2 respectively. If number of mobiles sold in May is $28\frac{4}{7}\%$ more than number of mobiles sold in April, then find the total number of items sold in May?
(a) 1900
(b) 1800
(c) 2000
(d) 2100
(e) 2400

Directions (68-80): What should come in place of question mark (?) in the following questions.

Q68. $\sqrt{121}+\sqrt{961}-\sqrt{289}=?^2$
(a) 3
(b) 5
(c) 7
(d) 4
(e) 6

Q69. $20\%\text{ of }240+18\%\text{ of }200=?$
(a) 80
(b) 83
(c) 89
(d) 94
(e) 84

Q70. $\frac{121}{?}=\frac{?}{144}$
(a) 112
(b) 132
(c) 144
(d) 121
(e) 128

Q71. $725\div\sqrt{625}+\frac{2}{5}\times 600=?$
(a) 269
(b) 254
(c) 256
(d) 289
(e) 220

Q72. $[12\times(1.9+2.1)]-12=?^2$
(a) 7
(b) 3
(c) 6
(d) 5
(e) 4

Q73. $(2343\div 11)+(126\div 3)=?$
(a) 250
(b) 225
(c) 248
(d) 255
(e) 260

Q74. $14\frac{2}{7}\%\ of\ 350-\frac{2}{3}\times ?=30$
(a) 15
(b) 30
(c) 60
(d) 75
(e) 24

Q75. $\frac{42\times12}{36\times7}+\sqrt{121}=?$
(a) 13
(b) 12
(c) 15
(d) 14
(e) 16

Q76. $20\%\text{ of }10\%\text{ of }900+\frac{84}{12}=?^2$
(a) 4
(b) 3
(c) 6
(d) 2
(e) 5

Q77. $5555\div 11\div 5=100+?$
(a) 1
(b) 2
(c) 3
(d) 0
(e) 4

Q78. $2\frac{1}{3}+2\frac{5}{6}-1\frac{1}{2}=?-6\frac{1}{6}$
(a) $9\frac{1}{6}$
(b) $9\frac{5}{6}$
(c) $8\frac{1}{6}$
(d) $8\frac{5}{6}$
(e) $9\frac{1}{2}$

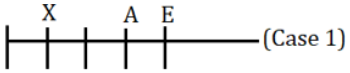
Q79. $1024\div 32=2^{\frac{1}{2}\times ?}$
(a) 5
(b) 8
(c) 14
(d) 10
(e) 12

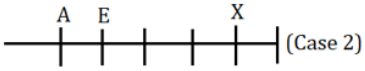
Q80. $1231+1312+2113-3211=?$
(a)1345
(b)1525
(c)1445
(d)1215
(e)1425

Solutions

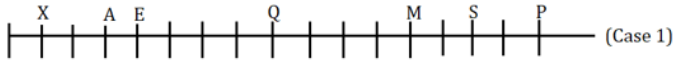
S1. Ans.(d)

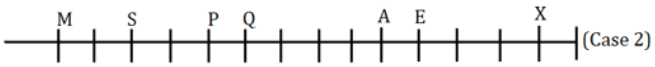
Sol. X sits 2nd from one of the extreme ends of the row. So, X can be 2nd from left end or 2nd from right end. Two persons sit between X and E who sits immediate right of A. So, two possible cases come out: -



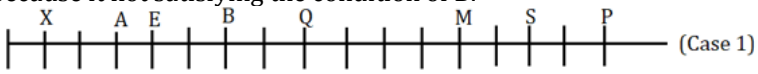


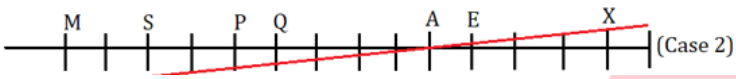
Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E.



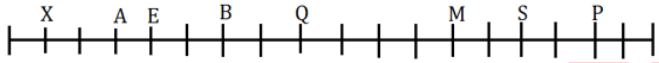


As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. Here, case 2 is ruled out because it not satisfying the condition of B.





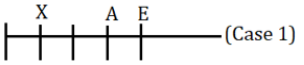
The number of persons sits to the right of P is one less than the number of persons sits to the left of A. So, the final arrangement is: -

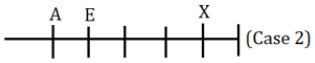


19 persons sit in the row.

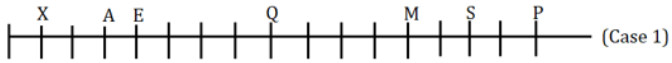
S2. Ans.(b)

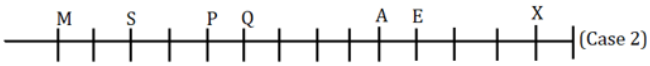
Sol. X sits 2nd from one of the extreme ends of the row. So, X can be 2nd from left end or 2nd from right end. Two persons sit between X and E who sits immediate right of A. So, two possible cases come out: -



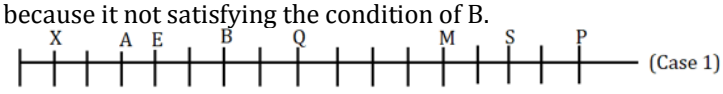


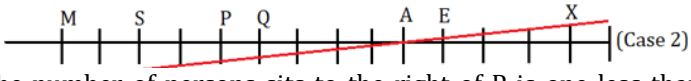
Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E.



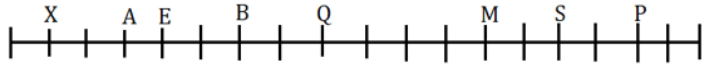


As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. Here, case 2 is ruled out because it not satisfying the condition of B.





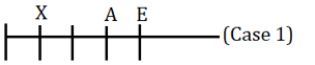
The number of persons sits to the right of P is one less than the number of persons sits to the left of A. So, the final arrangement is: -

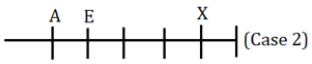


B sits 2nd to the left of Q.

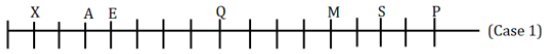
S3. Ans.(e)

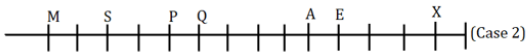
Sol. X sits 2nd from one of the extreme ends of the row. So, X can be 2nd from left end or 2nd from right end. Two persons sit between X and E who sits immediate right of A. So, two possible cases come out: -



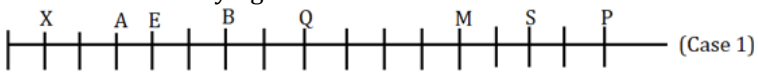


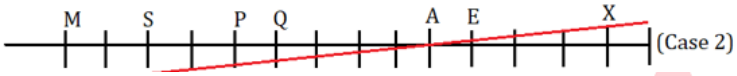
Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E.



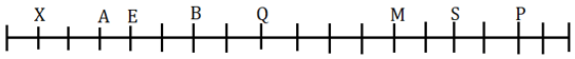


As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. Here, case 2 is ruled out because it not satisfying the condition of B.





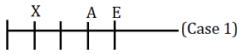
The number of persons sits to the right of P is one less than the number of persons sits to the left of A. So, the final arrangement is: -

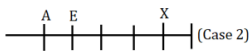


9 persons sit between B and P.

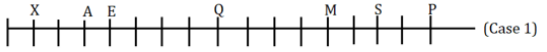
S4. Ans.(c)

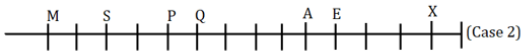
Sol. X sits 2nd from one of the extreme ends of the row. So, X can be 2nd from left end or 2nd from right end. Two persons sit between X and E who sits immediate right of A. So, two possible cases come out: -



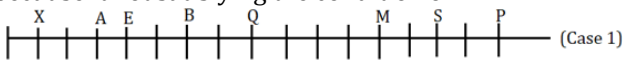


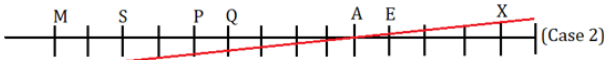
Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E.



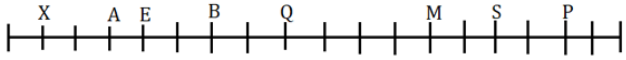


As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. Here, case 2 is ruled out because it not satisfying the condition of B.





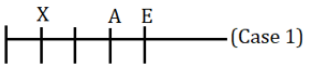
The number of persons sits to the right of P is one less than the number of persons sits to the left of A. So, the final arrangement is: -

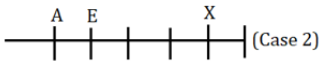


The number of persons sits to the right of P is one more than the number of persons sits to the left of X.

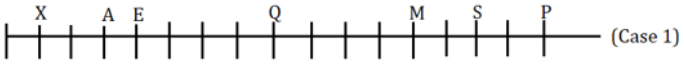
S5. Ans.(a)

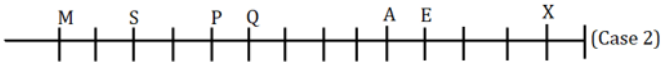
Sol. X sits 2nd from one of the extreme ends of the row. So, X can be 2nd from left end or 2nd from right end. Two persons sit between X and E who sits immediate right of A. So, two possible cases come out: -



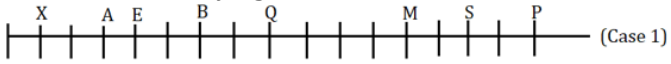


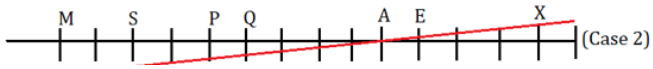
Eight persons sit between M and A. S sits 2nd to the left of P and 2nd to the right of M. Q sits exactly between M and E.



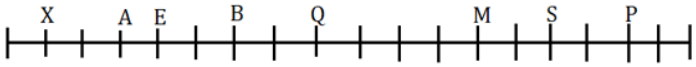


As many persons sit between B and E as sit between S and M. B is not adjacent to both A and X. Here, case 2 is ruled out because it not satisfying the condition of B.

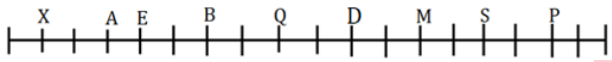




The number of persons sits to the right of P is one less than the number of persons sits to the left of A. So, the final arrangement is: -

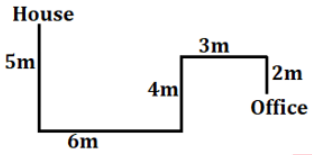


After the given condition, S sits 4th to the right of D.



S6. Ans.(c)

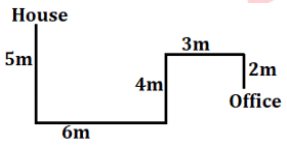
Sol.



South-east.

S7. Ans.(b)

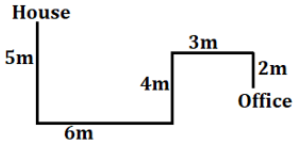
Sol.



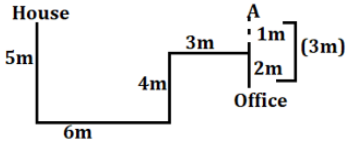
20m

S8. Ans.(d)

Sol.

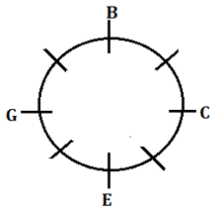


West

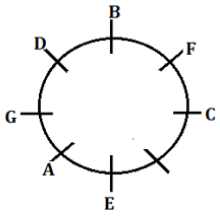


S9. Ans.(c)

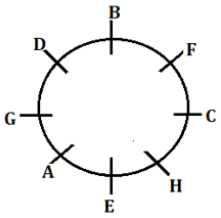
Sol. C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E.



Now D sits immediate left of G as the consecutive alphabetical named persons don't sit adjacent to each other. F and A faces each other. So, A sits immediate left of E and F sits immediate left of B as above same condition.



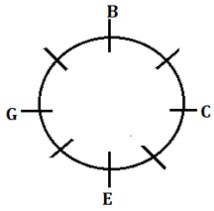
We know, H is one of the persons. So, the final arrangement is: -



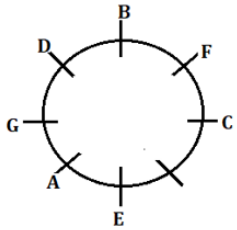
H sits 2nd to the right of A.

S10. Ans.(b)

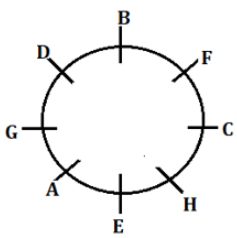
Sol. C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E.



Now D sits immediate left of G as the consecutive alphabetical named persons don't sit adjacent to each other. F and A faces each other. So, A sits immediate left of E and F sits immediate left of B as above same condition.



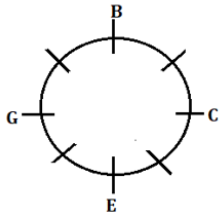
We know, H is one of the persons. So, the final arrangement is: -



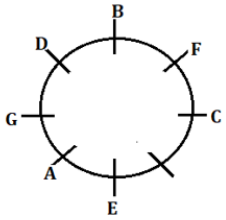
B sits 3rd to the right of H.

S11. Ans.(d)

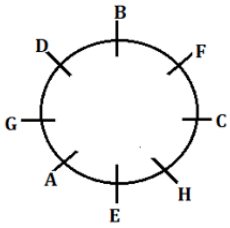
Sol. C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E.



Now D sits immediate left of G as the consecutive alphabetical named persons don't sit adjacent to each other. F and A faces each other. So, A sits immediate left of E and F sits immediate left of B as above same condition.



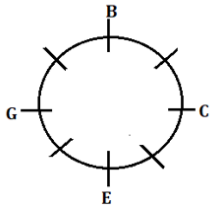
We know, H is one of the persons. So, the final arrangement is: -



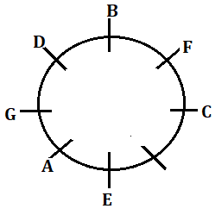
Four persons sit between D and C when counted from right of D.

S12. Ans.(e)

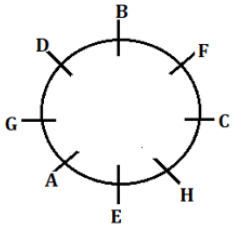
Sol. C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E.



Now D sits immediate left of G as the consecutive alphabetical named persons don't sit adjacent to each other. F and A faces each other. So, A sits immediate left of E and F sits immediate left of B as above same condition.



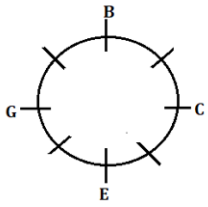
We know, H is one of the persons. So, the final arrangement is: -



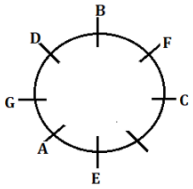
G faces C.

S13. Ans.(b)

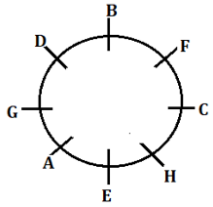
Sol. C sits 2nd to the right of E who faces B. G neither sits adjacent to B nor adjacent to E.



Now D sits immediate left of G as the consecutive alphabetical named persons don't sit adjacent to each other. F and A faces each other. So, A sits immediate left of E and F sits immediate left of B as above same condition.



We know, H is one of the persons. So, the final arrangement is: -

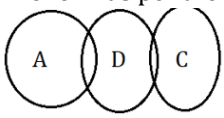


G and E are immediate neighbours of A.

S14. Ans.(e)

Sol. I follow- because no direct relation between A and C so its hold true in possibility.

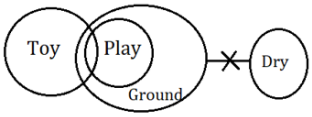
II follow- as per the Venn diagram we see that Some D are A so in possible case All D can be C holds true.



S15. Ans.(a)

Sol. I follow – We have given that no dry is ground and all the play is in ground so definitely we say No Play are Dry holds true

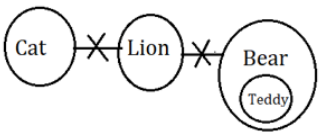
II does not follow- As per the Ven diagram we see that some toy are ground but we have not sufficient information that some toy are not ground. So, it's not hold true



S16. Ans.(b)

Sol. I does not follow- As per the Venn diagram we see that no Bear is Lion so, its not hold true even in possibility case.

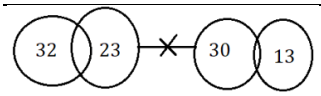
II follow- All the part of teddy is in Bear and none in other elements so no teddy is cat holds true.



S17. Ans.(e)

Sol. I follow – there is no direct relation between 32 and 13 so, in possibility case its holds true

II follow- there is no direct relation between 13 and 23 so, in possibility case its holds true



S18. Ans.(a)
Sol. I. H > J (True) II. E = K (False)

S19. Ans.(e)
Sol. I. T ≤ I (True) II. W > B (True)

S20. Ans.(d)
Sol. I. V ≥ C (False) II. D < W (False)

S21. Ans.(c)
Sol. 8th element from left end= W
4th to the right of W= C

S22. Ans.(e)
Sol. Seven - J2, W8, C7, M4 Z9, E5 and T3

S23. Ans.(c)
Sol. Two – DUA, UAW

S24. Ans.(d)
Sol. One (E5T)

S25. Ans.(c)
Sol. 64H. (except option (c) there is one place gap between the elements in the given options.)

S26. Ans.(d)
Sol. Two

HIERARCHY

S27. Ans.(a)
Sol.
P attends the seminar on an even date. Three persons attend seminar between P and K. There are two possible cases that P will attend the seminar either on 14th April or on 14th December.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23		
July	14		
	23		
December	14	K	P
	23		

L attends just after J but not in same month. Hence, J will attend the seminar on 23rd April and L will attend the seminar on 14th July in both the cases.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23	J	J
July	14	L	L
	23		
December	14	K	P
	23		

N attends seminar after K but not at last. Here case 1 is eliminated and N will attend the seminar on 23rd July.

Months	Dates	~~Persons (Case 1)~~	Persons (Case 2)
April	14	~~P~~	K
	23	~~J~~	J
July	14	~~L~~	L
	23		N
December	14	~~K~~	P
	23		

We know M is one of the persons so the final arrangement is: -

Months	Dates	Persons
April	14	K
	23	J
July	14	L
	23	N
December	14	P
	23	M

L attends seminar on 14th July.

S28. Ans.(d)

Sol. P attends the seminar on an even date. Three persons attend seminar between P and K. There are two possible cases that P will attend the seminar either on 14th April or on 14th December.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23		
July	14		
	23		
December	14	K	P
	23		

L attends just after J but not in same month. Hence, J will attend the seminar on 23rd April and L will attend the seminar on 14th July in both the cases.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23	J	J
July	14	L	L
	23		
December	14	K	P
	23		

N attends seminar after K but not at last. Here case 1 is eliminated and N will attend the seminar on 23rd July.

Months	Dates	~~Persons (Case 1)~~	Persons (Case 2)
April	14	~~P~~	K
	23	~~J~~	J
July	14	~~L~~	L
	23		N
December	14	~~K~~	P
	23		

We know M is one of the persons so the final arrangement is: -

Months	Dates	Persons
April	14	K
	23	J
July	14	L
	23	N
December	14	P
	23	M

Four persons attend seminar between K and M.

S29. Ans.(e)

Sol. P attends the seminar on an even date. Three persons attend seminar between P and K. There are two possible cases that P will attend the seminar either on 14th April or on 14th December.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23		
July	14		
	23		
December	14	K	P
	23		

L attends just after J but not in same month. Hence, J will attend the seminar on 23rd April and L will attend the seminar on 14th July in both the cases.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23	J	J
July	14	L	L
	23		
December	14	K	P
	23		

N attends seminar after K but not at last. Here case 1 is eliminated and N will attend the seminar on 23rd July.

Months	Dates	~~Persons (Case 1)~~	Persons (Case 2)
April	14	~~P~~	K
	23	~~J~~	J
July	14	~~L~~	L
	23		N
December	14	~~K~~	P
	23		

We know M is one of the persons so the final arrangement is: -

Months	Dates	Persons
April	14	K
	23	J
July	14	L
	23	N
December	14	P
	23	M

L attends seminar just before N.

S30. Ans.(c)

Sol. P attends the seminar on an even date. Three persons attend seminar between P and K. There are two possible cases that P will attend the seminar either on 14th April or on 14th December.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23		
July	14		
	23		
December	14	K	P
	23		

L attends just after J but not in same month. Hence, J will attend the seminar on 23rd April and L will attend the seminar on 14th July in both the cases.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23	J	J
July	14	L	L
	23		
December	14	K	P
	23		

N attends seminar after K but not at last. Here case 1 is eliminated and N will attend the seminar on 23rd July.

Months	Dates	~~Persons (Case 1)~~	Persons (Case 2)
April	14	~~P~~	K
	23	~~J~~	J
July	14	~~L~~	L
	23		N
December	14	~~K~~	P
	23		

We know M is one of the persons so the final arrangement is: -

Months	Dates	Persons
April	14	K
	23	J
July	14	L
	23	N
December	14	P
	23	M

L attends the seminar on 14th July not on 23rd April.

S31. Ans.(b)

Sol. P attends the seminar on an even date. Three persons attend seminar between P and K. There are two possible cases that P will attend the seminar either on 14th April or on 14th December.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23		
July	14		
	23		
December	14	K	P
	23		

L attends just after J but not in same month. Hence, J will attend the seminar on 23rd April and L will attend the seminar on 14th July in both the cases.

Months	Dates	Persons (Case 1)	Persons (Case 2)
April	14	P	K
	23	J	J
July	14	L	L
	23		
December	14	K	P
	23		

N attends seminar after K but not at last. Here case 1 is eliminated and N will attend the seminar on 23rd July.

Months	Dates	~~Persons (Case 1)~~	Persons (Case 2)
April	14	~~P~~	K
	23	~~J~~	J
July	14	~~L~~	L
	23		N
December	14	~~K~~	P
	23		

We know M is one of the persons so the final arrangement is: -

Months	Dates	Persons
April	14	K
	23	J
July	14	L
	23	N
December	14	P
	23	M

Only L will remain unchanged.

Months	Dates	Persons	Alphabetical Order
April	14	K	J
	23	J	K
July	14	**L**	**L**
	23	N	M
December	14	P	N
	23	M	P

S32. Ans.(b)

Sol.

Given Number- **7256291543**
Descending order- 9765543221
Interchanged- 79**5**64**5**2312
3rd digit from left end= 5 and 5th digit from right end=5
Sum = 5+5=10.

S33. Ans.(e)

Sol. C lives west of G and they live on prime numbered floor. P lives just north-east of C. Two possible cases will come out here.

Floors	Flat I	Flat II	Flat I	Flat II
	Case 1		Case 2	
5				
4				P
3		P	C	G
2	C	G		
1				

One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. Case 2 will eliminate here for not satisfying the given condition.

Floors	Flat I	Flat II	~~Flat I~~	~~Flat II~~
	Case 1		~~Case 2~~	
5			~~M/~~	~~M/~~
4	M/	M/		~~P~~
3		P	~~G~~	~~G~~
2	C	G	~~F~~	
1	F			

D lives south-east of M and south of T. S and T live on same floor. It means S and T will live on 5th floor, M lives in flat I of 4th floor and D lives in flat II of 1st floor.

Floors	Flat I	Flat II
	Case 1	
5	S	T
4	M	
3		P
2	C	G
1	F	D

U lives above Q. After this statement, we get the specific flat and floor of each person. So, the final arrangement is:

Floors	Flat I	Flat II
5	S	T
4	M	U
3	Q	P
2	C	G
1	F	D

P lives just below U's flat.

S34. Ans.(b)

Sol. C lives west of G and they live on prime numbered floor. P lives just north-east of C. Two possible cases will come out here.

Floors	Flat I	Flat II	Flat I	Flat II
	Case 1		Case 2	
5				
4				P
3		P	C	G
2	C	G		
1				

One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. Case 2 will eliminate here for not satisfying the given condition.

Floors	Flat I	Flat II	~~Flat I~~	~~Flat II~~
	Case 1		~~Case 2~~	
5			~~M/~~	~~M/~~
4	M/	M/		~~P~~
3		P	~~G~~	~~G~~
2	C	G	~~F~~	
1	F			

D lives south-east of M and south of T. S and T live on same floor. It means S and T will live on 5th floor, M lives in flat I of 4th floor and D lives in flat II of 1st floor.

Floors	Flat I	Flat II
	Case 1	
5	S	T
4	M	
3		P
2	C	G
1	F	D

U lives above Q. After this statement, we get the specific flat and floor of each person. So, the final arrangement is:

Floors	Flat I	Flat II
5	S	T
4	M	U
3	Q	P
2	C	G
1	F	D

Q lives on 3rd floor.

S35. Ans.(a)

Sol.

C lives west of G and they live on prime numbered floor. P lives just north-east of C. Two possible cases will come out here.

Floors	Flat I	Flat II	Flat I	Flat II
	Case 1		Case 2	
5				
4				P
3		P	C	G
2	C	G		
1				

One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. Case 2 will eliminate here for not satisfying the given condition.

Floors	Flat I	Flat II	~~Flat I~~	~~Flat II~~
	Case 1		~~Case 2~~	
5			~~M/~~	~~M/~~
4	M/	M/		~~P~~
3		P	~~G~~	~~G~~
2	C	G	~~F~~	
1	F			

D lives south-east of M and south of T. S and T live on same floor. It means S and T will live on 5th floor, M lives in flat I of 4th floor and D lives in flat II of 1st floor.

Floors	Flat I	Flat II
	Case 1	
5	S	T
4	M	
3		P
2	C	G
1	F	D

U lives above Q. After this statement, we get the specific flat and floor of each person. So, the final arrangement is:

Floors	Flat I	Flat II
5	S	T
4	M	U
3	Q	P
2	C	G
1	F	D

Except D, all persons live in flat I.

S36. Ans.(c)

Sol. C lives west of G and they live on prime numbered floor. P lives just north-east of C. Two possible cases will come out here.

Floors	Flat I	Flat II	Flat I	Flat II
	Case 1		Case 2	
5				
4				P
3		P	C	G
2	C	G		
1				

One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. Case 2 will eliminate here for not satisfying the given condition.

Floors	Flat I	Flat II	~~Flat I~~	~~Flat II~~
	Case 1		~~Case 2~~	
5			~~M/~~	~~M/~~
4	M/	M/		~~P~~
3		P	~~G~~	~~G~~
2	C	G	~~F~~	
1	F			

D lives south-east of M and south of T. S and T live on same floor. It means S and T will live on 5th floor, M lives in flat I of 4th floor and D lives in flat II of 1st floor.

Floors	Flat I	Flat II
	Case 1	
5	S	T
4	M	
3		P
2	C	G
1	F	D

U lives above Q. After this statement, we get the specific flat and floor of each person. So, the final arrangement is:

Floors	Flat I	Flat II
5	S	T
4	M	U
3	Q	P
2	C	G
1	F	D

F lives south of Q.

S37. Ans.(d)

Sol. C lives west of G and they live on prime numbered floor. P lives just north-east of C. Two possible cases will come out here.

Floors	Flat I	Flat II	Flat I	Flat II
	Case 1		Case 2	
5				
4				P
3		P	C	G
2	C	G		
1				

One person lives between P and F and both live in different numbered flat. Two floors gap between F and M who does not live on odd numbered floors. Case 2 will eliminate here for not satisfying the given condition.

Floors	Flat I	Flat II	~~Flat I~~	~~Flat II~~
	Case 1		~~Case 2~~	
5			~~M/~~	~~M/~~
4	M/	M/		~~P~~
3		P	~~G~~	~~G~~
2	C	G	~~F~~	
1	F			

D lives south-east of M and south of T. S and T live on same floor. It means S and T will live on 5th floor, M lives in flat I of 4th floor and D lives in flat II of 1st floor.

Floors	Flat I	Flat II
	Case 1	
5	S	T
4	M	
3		P
2	C	G
1	F	D

U lives above Q. After this statement, we get the specific flat and floor of each person. So, the final arrangement is:

Floors	Flat I	Flat II
5	S	T
4	M	U
3	Q	P
2	C	G
1	F	D

D lives in flat II on 1st floor.

S38. Ans.(d)

Sol. Series in reverse order= 523 457 748 **945** 264

S39. Ans.(a)

Sol. Third lowest number= 523; Sum= 5+2+3= 10

S40. Ans.(e)

Sol. New series= 462 549 **847** 754 325

S41. Ans.(b)

Sol.

Required number of visitors = 600+300+700

= 1600

S42. Ans.(d)

Sol. Required $\% = \frac{500}{700} \times 100 = 71\frac{3}{7}\%$

S43. Ans.(a)

Sol. Required ratio $= \frac{(350+250)}{750+500} = 12:25$

S44. Ans.(c)

Sol. Required average $= \frac{1}{3}(350 + 550 + 600) = 500$

S45. Ans.(e)

Sol.

Required difference = (350+400+500+550+600+750+800)
(250+300+450+200+700+500+600)
= 3950 – 3000 = 950

S46. Ans.(b)

Sol.

Pattern of series –
3×2 - 1 = 5
5×2 - 1 = 9
9×2 - 1 = 17
17×2 - 1 = 33
? = 33×2 - 1 = 65
0r
3 + 2= 5
5 + 4 = 9
9 + 8 = 17
17 + 16 = 33
? = 33 + 32 = 65

S47. Ans.(d)

Sol.

Pattern of series –
Addition of prime number
3 + 2 = 5
5 + 3 = 8
8 + 5 = 13
13 + 7 = 20
?= 20 + 11 = 31

S48. Ans.(e)

Sol.

Pattern of series –
1 × 16 = 16
16 × 8 = 128
128 × 4 = 512
512 × 2 = 1024
? = 1024 × 1 = 1024

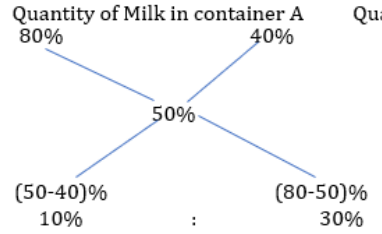
S49. Ans.(e)

Sol.

Pattern of series –
$1 \times 1 + 1 = 2$
$2 \times 2 + 2 = 6$
$6 \times 3 + 3 = 21$
$21 \times 4 + 4 = 88$
$? = 88 \times 5 + 5 = 445$

S50. Ans.(b)
Sol.
Pattern of series –
$5 + 1^2 = 6$
$6 + 2^2 = 10$
$10 + 3^2 = 19$
$19 + 4^2 = 35$
$? = 35 + 5^2 = 60$

S51. Ans.(b)
Sol.
Milk in container A = 80%
Milk in container B = (100-60) % = 40%
ATQ, Using Allegation Method



So, required ratio = 1:3

S52. Ans.(d)
Sol.
Let the initial radius and height of cylinder be 4r unit and 10h unit respectively.
So, initial lateral surface area of cylinder = $2\pi \times 4r \times 10h$
$= 80\pi rh$ unit^2
After increment, new radius of cylinder = $4r \times \frac{5}{4} = 5r$ unit
New height of cylinder = $10h \times \frac{13}{10} = 13h$ unit
So, new lateral surface area of cylinder = $2\pi \times 5r \times 13h = 130\pi rh$ unit^2
So, required % change = $\frac{130\pi rh - 80\pi rh}{80\pi rh} \times 100 = 62.5\%$

S53. Ans.(d)
Sol.
Let the present ages of Mohit and Riya be m and r respectively.
ATQ,
(m+5) + (r+5) = 60
m+r = 50____(1)
And,
$\frac{r-5}{m-5} = \frac{3}{5}$
5r – 3m = 10____(2)
From (1) and (2):
r = 20 years

S54. Ans.(a)
Sol.
Quarterly rate = $\frac{40}{4}\% = 10\%$
Number of quarters for which money is invested = $\frac{9}{3} = 3$ Quarter
Total amount = $36000\left(1 + \frac{10}{100}\right)^3$
= 47916 Rs.
So, required interest = 47916-36000 = 11916 Rs.

S55. Ans.(b)
Sol.
ATQ,
$\frac{1}{8} + \frac{1}{x+2} = \frac{5}{24}$
$\frac{x+10}{8(x+2)} = \frac{5}{24}$
3x+30 = 5x+10
x = 10

S56. Ans.(b)
Sol.
Let the upstream speed of a boat and speed of current be 4x kmph and x kmph respectively.
Speed of boat in still water = 4x+x = 5x kmph
Downstream speed of boat = 5x+x = 6x kmph
ATQ, $6x = \frac{60}{2.5}$
x = 4 kmph

S57. Ans.(c)
Sol.
ATQ,
$\frac{x}{100} \times 3y = \frac{y}{100} \times 2z$
$\frac{x}{z} = \frac{2}{3}$
Adding 1 on both the sides:
$\frac{x+z}{z} = 1\frac{2}{3}$

S58. Ans.(a)
Sol.
Total cost price of 54 bananas = 220 Rs.
Total selling price of 54 bananas = $\frac{54}{12} \times 50$ = 225 Rs.
Total Profit = 225-220 = 5 Rs.

S59. Ans.(b)
Sol.
Ratio of profit-sharing of Pinky and Santosh = (45000x9) : (55000x12)
= 27:44
ATQ, Santosh profit = Rs.8800
So, Total profit = $\frac{27+44}{44} \times 8800$ = Rs. 14200

S60. Ans.(e)
Sol.
Let numerator and denominator of the original fraction be x & y respectively.
So, original fraction = $\frac{x}{y}$
ATQ,
$\frac{x+5}{2y} = \frac{3}{4}$
$4x + 20 = 6y$
It can't be solved further. So, answer cannot be determined

S61. Ans.(a)
Sol.
Let population of Delhi in 2017 was X.
ATQ,
$X \times \frac{90}{100} \times \frac{90}{100} \times \frac{90}{100} = 14{,}58{,}000$
$X = 14{,}58{,}000 \times \frac{10}{9} \times \frac{10}{9} \times \frac{10}{9}$
$X = 20{,}00{,}000$

S62. Ans.(a)
Sol.
Let length of train X be a meters and speed of train X be b m/sec.
And, speed of train Y = $90 \times \frac{5}{18} = 25$ m/sec
ATQ,
$\frac{a+400}{180} = 25 - b$
$a + 400 = 4500 - 180b$
$a + 180b = 4100$ ...(i)
And,
$\frac{a}{25} = b$
$a = 25b$
Putting value of a in (i):
$205b = 4100$
$b = 20$

S63. Ans.(b)
Sol.
Required ratio $= \frac{550+400}{450+700} = \frac{950}{1150}$
$= 19 : 23$

S64. Ans.(a)
Sol.
Required number of items $= 350 \times \frac{10}{100} + 600 \times \frac{12}{100} + 420 \times \frac{15}{100}$
$= 35 + 72 + 63$
$= 170$

S65. Ans.(d)
Sol.
Required difference $= (450 + 700 + 480) - (300 + 550 + 400)$
$= 1630 - 1250 = 380$

S66. Ans.(c)
Sol.
Required percentage $= \frac{(500+700)-(400+300)}{(500+700)} \times 100$
$= \frac{1200-700}{1200} \times 100 = 41\frac{2}{3}\%$

S67. Ans.(d)
Sol.
Number of sold mobile in May $= \frac{9}{7} \times 700 = 900$
So, total number of items sold in May $= \frac{2+3+2}{3} \times 900 = 2100$

S68. Ans.(b)
Sol.
$?^2 = 11 + 31 - 17$
$?^2 = 25$
$? = 5$

S69. Ans.(e)
Sol.
$\frac{20}{100} \times 240 + \frac{18}{100} \times 200 = ?$
$? = 48 + 36$
$? = 84$

S70. Ans.(b)
Sol.
$\frac{121}{?} = \frac{?}{144}$
$? = 11 \times 12$
$? = 132$

S71. Ans.(a)
Sol.
$= \frac{725}{25} + 240$
$= 29 + 240$
$= 269$

S72. Ans.(c)
Sol.
$12 \times 4 - 12 = ?^2$
$? = 6$

S73. Ans.(d)
Sol.
$\frac{2343}{11}+\frac{126}{3}=?$
$213 + 42 = ?$
$? = 255$

S74. Ans.(b)
Sol.
$\frac{1}{7}\times 350-\frac{2}{3}\times ?=30$
$50 - 30 = \frac{2}{3}\times ?$
$? = 30$

S75. Ans.(a)
Sol.
$\frac{42\times 12}{36\times 7}+11=?$
$? = 13$

S76. Ans.(e)
Sol.
$\frac{20}{100}\times\frac{10}{100}\times 900+7=?^2$
$25 = ?^2$
$? = 5$

S77. Ans.(a)
Sol.
$\frac{5555}{11\times 5}=100+?$
$101 = 100 + ?$
$? = 1$

S78. Ans.(b)
Sol.
$2+2+6-1+\frac{1}{3}+\frac{5}{6}+\frac{1}{6}-\frac{1}{2}=?$
$? = 9\frac{5}{6}$

S79. Ans.(d)
Sol.
$\frac{1024}{32}=2^{\frac{1}{2}\times ?}$
$2^5 = 2^{\frac{1}{2}\times ?}$
$? = 5\times 2 = 10$

S80. Ans.(c)
Sol.
$4656 - 3211 = ?$
$? = 1445$